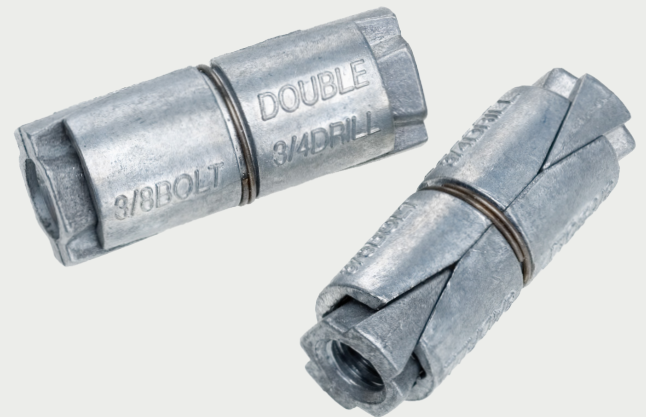


# DOUBLE EXPANSION SHIELDS

ZAMAC ALLOY

CERTIFICATION

TECHNICAL DATA



**FOR INSTALL SUPPORT**  
[sales@allfasteners.com](mailto:sales@allfasteners.com)



**FOR SPECIFICATION SUPPORT**  
[certs@allfasteners.com](mailto:certs@allfasteners.com)



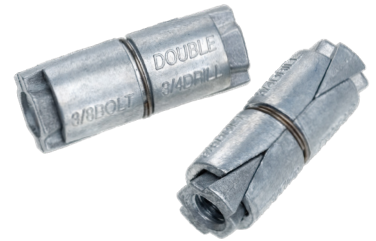
**FOR CUSTOMER SUPPORT**  
888.859.6060



# DOUBLE EXPANSION SHIELDS

ZAMAC ALLOY

**Double Expansion Shields** are used for medium duty applications in rock, concrete and brick. This anchor eliminates high stress points detrimental in fastening into materials of medium hardness. This anchor expands fully, has high gripping power, and is ideal where there are shear loads or where the bolt is subject to side pressure or vibration.



## KEY BENEFITS

- Performs in base material of varying strength
- Corrosion resistant zamac alloy
- Internally threaded anchor for simple installation and removal of threaded rod

## TESTING PROCEDURE

The anchors were mounted in 3,500 psi minimum concrete in accordance with Customer's Instructions and subjected to Ultimate Load by pullout testing using a Tinius Universal Tensile Machine. Shear force was also determined.

## PERFORMANCE DATA

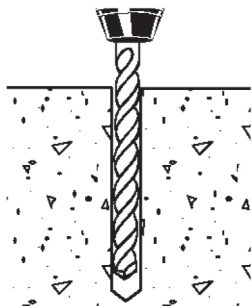
**TABLE 1: DOUBLE EXPANSION SHIELD PERFORMANCE DATA**

ANCHOR DIAMETER (in.)	RECOMMENDED HOLE DIAMETER (in.)	MINIMUM DIAMETER OF SHIELD BODY (in.)	MINIMUM LENGTH OF SHIELD BODY (in.)	ULTIMATE TENSILE STRENGTH		SHEAR STRENGTH (lbs.)
				3,000 psi CONCRETE	3,500 psi CONCRETE	
1/4	1/2	–	–	–	1857	2784
3/8	3/4	–	–	–	4212	3279
1/2	7/8	–	–	–	9258	4579
5/8	1	1	2-3/4	3250	–	–
3/4	1-1/4	1-1/8	3-1/4	4600	–	–
7/8	1-5/8	1-1/2	4	5850	–	–
1	1-3/4	1-5/8	4-1/4	6700	–	–

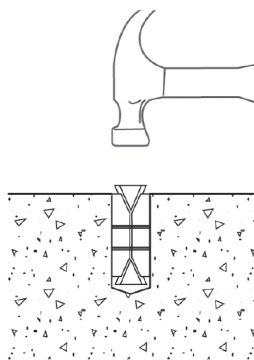
Tested in 3500 psi concrete.

**DOUBLE EXPANSION SHIELDS**

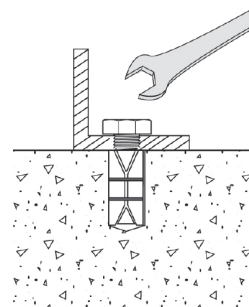
ZAMAC ALLOY

**INSTALLATION INSTRUCTIONS**

Drill a hole into the base material to the minimum depth required. The tolerances of the drill bit used should meet the requirements of ANSI Standard B212.15. Do not expand the anchor prior to installation. Do not over drill the hole unless the application calls for a subset anchor.



Insert anchor into the hole, threaded cone end first until the outer sleeve is flush with the surface of the base material.



Position fixture, then insert screw or bolt and tighten. For maximum expansion, the upper cone should protrude slightly before setting. The bolt must engage a minimum of 2/3 of the anchor threads.

**ORDERING INFORMATION****TABLE 2: DOUBLE EXPANSION SHIELD ORDERING INFORMATION**

PART NUMBER	SIZE	DRILL SIZE	MAX. FIXTURE THICKNESS	QTY/BOX
1DES14	1/4"	1/2"	1/8"	100
1DES56	5/16"	5/8"	1/8"	50
1DES38	3/8"	3/4"	1/4"	50
1DES12	1/2"	7/8"	1/2"	25
1DES58	5/8"	1"	3/4"	25
1DES34	3/4"	1-1/4"	1-1/4"	10